

ABSTRACT OF THE DISCLOSURE

A method for treating a film of material, which can be defined on a substrate, e.g., silicon. The method includes providing a substrate comprising a cleaved surface, which is characterized by a predetermined surface roughness value. The substrate also has a distribution of hydrogen bearing particles defined from the cleaved surface to a region underlying said cleaved surface. The method also includes increasing a temperature of the cleaved surface to greater than about 1,000 Degrees Celsius while maintaining the cleaved surface in an etchant bearing environment to reduce the predetermined surface roughness value by about fifty percent and greater. Preferably, the value can be reduced by about eighty or ninety percent and greater, depending upon the embodiment.